

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1. (Currently Amended) In a communication system employing coded signals, a method of extracting a desired coded signal from a composite signal comprising the desired signal and one or more interfering coded signals, the method comprising: ~~the steps of:~~

- a) receiving a composite signal;
- b) processing, for each received signal code, individual signals in a first signal processor ~~(112—118; 400)~~;
- c) determining transport format indicator (TFI) signals using buffer and decoder circuits ~~(254, 264; 420, 430)~~ to provide a bit rate of a particular frame for at least one interfering signal;
- d) dividing ~~[[the]]~~ a TFI signal path into first and second signal paths;
- e) wherein, in a first signal path ~~(442, 452)~~, TFI signals are passed via a latch ~~(290; 440, 450)~~ to provide the first signal processor with

a TFI signal, whereby to assign the bit rate ~~determined for said last~~ of said particular frame for ~~[[the]]~~ a next frame; and

f) wherein, in the second path ~~(422, 432)~~, TFI signals are passed to a further signal processor ~~(262, 500)~~ to adjust the bit rate of an output signal ~~(280, 510—540)~~.

Claim 2. (Currently Amended) A method according to Claim 1, wherein the first signal processor comprises a bank of Rake receiver ~~(112-118)~~, each Rake receiver ~~(112-118)~~ demodulating and despreading only signals having a code associated with the Rake receiver, each Rake receiver ~~(112-118)~~ outputting a decision variable signal which is applied to a decision device ~~(122-128)~~ which limits the output and, the decision device ~~(122-128)~~ outputting to a remodulation/respread unit ~~(132-138)~~ which provides a remodulated and respread signal to a channel reconstruction filter ~~(142-148)~~, the filter ~~(142-148)~~ receiving a channel estimation signal (CE1) from said Rake receiver ~~(112-118)~~ to provide a reconstructed signal.

Claim 3. (Currently Amended) A method according to Claim 2, wherein the reconstructed signal is fed to a summer ~~[[150]]~~ to provide a signal ~~[[155]]~~ which is then subtracted in a bank of subtractors ~~(162-168)~~ which subtracts a signal ~~(172-178)~~ corresponding to the individual reconstructed signal ~~(182-188)~~.

Claim 4. (Currently Amended) A method according to Claim 3, wherein the signal corresponding to the individual reconstructed signal ~~(182-188)~~ is processed by a further Rake receiver ~~[(202)]~~ to provide;

i. a demodulated and despread signal to dedicated physical data channel (DPDCH) buffer ~~[(252)]~~; and

ii. a transport format indicator (TFI) signal ~~[(222)]~~;

wherein the TFI signal is buffered in TFI buffer ~~[(254)]~~, the bit rate is determined and passed to ~~[(the)]~~ a bit rate adjuster circuit ~~(264)~~.

Claim 5. (Currently Amended) A method according to Claim 2, wherein the further Rake receiver ~~[(202)]~~ provides a transmit power control (TPC) signal whereby to enable a transmitter to transmit signals to the receiver at an appropriate power level.

Claim 6. (Currently Amended) A method according to Claim 2, wherein the further Rake receiver ~~[(202)]~~ provides a signal to noise plus a deference (SNI) signal ~~[(242)]~~.

Claim 7. (Currently Amended) A method according to Claim 1, wherein the first signal processor comprises a first joint detection device ~~[(400)]~~, the joint detection device processing signals with respect to their signal codes whereby to determine TFI signals.

Claim 8. (Original) A method according to claim 7, wherein the first signal processor provides a plurality of further control signals for extracting said desired signal.

Claim 9. (Original) A method according to claim 8, wherein said plurality of further control signals comprise a transmit power control (TPC) signal and a signal to noise plus interference (SNI) signal.

Claim 10. (Currently Amended) In a communication system employing coded signals, apparatus operable to extract a desired coded signal from a composite signal comprising the desired signal and one or more interfering coded signals, the apparatus comprising: [[-]]

- a) receiver means arranged to receive a signal;
- b) a first signal processor (~~112—118; 400~~) for processing individual signals, for each received signal code;
- c) buffer and decoder circuits (~~254, 264; 420, 430~~) for determining transport format indicator (TFI) signals, to provide a bit rate of a particular frame for at least one interfering signal;
- d) a path divider for dividing ~~[[the]]~~ a TFI signal path into first and second signal paths;

wherein, in the first signal path ~~(442, 452)~~, TFI signals are passed via a latch ~~(290; 440, 450)~~, to provide the first signal processor with a TFI signal, whereby to assign the bit rate ~~determined for~~ of said particular ~~[[last]]~~ frame for ~~[[the]]~~ a next frame; and

wherein, in the second path ~~(422, 432)~~, TFI signals are passed to a further signal processor ~~(262; 500)~~ to adjust the bit rate of an output signal ~~(280; 510—540)~~.

Claim 11. (Currently Amended) Apparatus according to Claim 10, wherein the first signal processor comprises a bank of Rake receiver ~~(112-118)~~, each Rake receiver ~~(112-118)~~ operable to demodulate and despread only signals having a code associated with the Rake receiver, each Rake receiver ~~(112-118)~~ being operable to output a decision variable signal which is applied to a decision device ~~(122-128)~~ which is operable to limit the output and, the decision device ~~(122-128)~~ being operable to output to a remodulation/respread unit ~~(132-138)~~ which is operable to provide a remodulated and respread signal to a channel reconstruction filter ~~(142-148)~~, the filter ~~(142-148)~~ being operable to receive a channel estimation signal (CE1) from said Rake receiver ~~(112-118)~~ to provide a reconstructed signal which is fed to a summer ~~[[150]]~~ to provide a signal ~~[[155]]~~ which is then subtracted in a bank of subtractors ~~(162-168)~~ which are operable to subtract a signal ~~(172-178)~~ corresponding to the individual reconstructed signal ~~(182-188)~~.

Claim 12. (Currently Amended) Apparatus according to Claim 11, comprising a further Rake receiver  $[(202)]$  and a TFI buffer  $[(254)]$ , wherein the further Rake receiver is operable to process the signal from the subtractor  $[(190)]$  to provide;

i. a demodulated and despread signal to dedicated physical data channel (DPDCH) buffer  $[(252)]$ ; and

ii. a transport format indicator (TFI) signal  $[(222)]$ ;

wherein the TFI signal is buffered in the TFI buffer, and the bit rate is determined and passed to  $[(the)]$  a bit rate adjuster circuit  $[(264)]$ .

Claim 13. (Currently Amended) Apparatus method according to Claim 12, wherein the further Rake receiver  $[(202)]$  is operable to provide a transmit power control (TPC) signal whereby to enable a transmitter to transmit signals to the receiver at an appropriate power level.

Claim 14. (Currently Amended) A method according to Claim 12, wherein the further Rake receiver  $[(202)]$  is operable to provide a signal to noise plus a deference (SNI) signal  $[(242)]$ .

Claim 15. (Currently Amended) A method according to Claim 10, wherein the first signal processor comprises a first joint detection device

[(400)], the joint detection device being operable to process signals with respect to their signal codes whereby to determine TFI signals.

Claim 16. (Original) A method according to claim 15, wherein the first signal processor is operable to provide a plurality of further control signals for extracting said desired signal.

Claim [[16.]] 17. (Currently Amended) A method according to ~~claim 15,~~ Claim 16, wherein said plurality of further control signals comprise a transmit power control (TPC) signal and a signal to noise plus interference (SNI) signal.

Claim 18. (New) A method of extracting a desired coded signal from a received composite signal comprising the desired coded signal and one or more interfering signals, the method employing coded signals in a communication system, said method comprising:

- a) determining a bit rate for at least one interfering signal in a particular frame;
- b) assigning the determined bit rate to at least one interfering signal in a subsequently received frame;
- (c) determining the at least one interfering signal in the subsequently received frame using the determined bit rate; and

d) extracting the desired coded signal in the subsequently received frame by subtracting the determined at least one interfering signal from the composite signal in the subsequently received frame.

Claim 19. (New) A method according to Claim 18, further comprising:

e) demodulating said subsequently received frame of said at least one interfering signal using said assigned bit rate to isolate said at least one interfering signal from other interfering signals.

Claim 20. (New) A method according to Claim 19, wherein step e) produces a plurality of control signals for extracting said desired signal.

Claim 21. (New) A method according to Claim 20, wherein said plurality of control signals comprises a transport format indicator (TFI) signal, a transmit power control (TPC) signal and a signal to noise plus interference (SNI signal).

Claim 22. (New) A method according to Claim 21, wherein step e) is carried out using interference cancellation.

Claim 23. (New) A method according to Claim 21, wherein step e) is carried out using joint detection.

Claim 24. (New) A method according to claim 21, further comprising the steps of:



f) determining an actual bit rate for said subsequently received frame of said at least one interfering signal; and

g) demodulating said subsequently received frame of said at least one interfering signal using said actual bit rate to extract said desired signal.

Claim 25. (New) A method according to Claim 24, wherein step g) is carried out using joint detection.

Claim 26. (New) A method according to Claim 24, wherein step g) is carried out using at least one Rake receiver.

Claim 27. (New) A method according to Claim 26, wherein step g) produces a plurality of control signals for extracting said desired signal.

Claim 28. (New) A method according to Claim 27, wherein said plurality of control signals comprises a transport format indicator signal, a transmit power control signal and a signal to noise plus interference signal.

Claim 29. (New) A method according to Claim 28, wherein step a) comprises isolating said transport format indicator signal for said frame of said interfering signal and using said transport indicator signal to determine an actual bit rate for that frame.

Claim 30. (New) An apparatus operable in a communications system to extract a desired coded signal from a received composite signal comprising the desired coded signal and one or more interfering signals, the apparatus comprising:

- a) a first signal processor operable to determine a bit rate for at least one interfering signal in a frame;
- b) a second signal processor operable to assign the determined bit rate to at least one interfering signal in a subsequently received frame;
- c) a third signal processor for determining the at least one interfering signal in the subsequently received frame using the determined bit rate; and
- d) subtracting means for extracting the desired coded signal in the subsequently received frame by subtracting the determined at least one interfering signal from the composite signal in the subsequently received frame.

Claim 31. (New) An apparatus according to Claim 30 wherein:

- the first signal processor comprises a bank of Rake receivers;
- each Rake receiver is operable to demodulate and despread only signals having a code associated with the Rake receiver;

each Rake receiver is operable to output a decision variable signal which is applied to a decision device for limiting the output;

the decision device is operable to output to a remodulation/respread unit for providing a remodulated and respread signal to channel reconstruction filter;

the filter is operable to receive a channel estimation signal from said Rake receiver to provide a reconstructed signal which is fed to a summer to provide a signal which is then subtracted in a bank of subtractors which are operable to subtract a signal corresponding to the individual reconstructed signal corresponding to the individual reconstructed signal.

Claim 32. (New) An apparatus according to Claim 31, comprising a further Rake receiver and a TFI buffer, wherein the further Rake receiver is operable to process the signal from the subtractor to provide:

- i. a demodulated and despread signal to dedicated physical data channel buffer; and
- ii. a transport format indicator (TFI) signal.

Claim 33. (New) An apparatus according to Claim 32, wherein the further Rake receiver is operable to provide a transmit power control signal

whereby to enable a transmitter to transmit signals to the receiver at an appropriate power level.

Claim 34. (New) An apparatus according to Claim 32, wherein the further Rake receiver is operable to provide a signal to noise plus a deference (SNI) signal.

Claim 35. (New) An apparatus according to Claim 30, wherein:

the first signal processor comprises a first joint detection device;  
and

the joint detection device is operable to process signals with respect to their signal codes whereby to determine TFI signals.

Claim 36. (New) An apparatus according to Claim 35, wherein the first signal processor is operable to provide a plurality of further control signals for extracting said desired signal.

Claim 37. (New) An apparatus according to Claim 35, wherein said plurality of further control signals comprise a transmit power control (TPC) signal and a signal to noise plus interference (SNI) signal.